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F2eaas and Parks
1995 [Environmental
assessment for the
Alpine ski lift
modifications,

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Environmental assessment for the Alpine



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**Montana Department
of
Fish, Wildlife & Parks**



1400 So. 19th
Bozeman, MT 59715

February 15, 1995

TO: Environmental Quality Council, Capitol Building, Room 106, POB 201704, Helena, MT 59620-1704
Dept. of Health & Environmental Sciences, Director's Office, Cogswell Building, POB 200901, Helena, MT 59620-0901
Dept. of Fish, Wildlife & Parks
 Director's Office
 Parks Division
 Fisheries Division
 Wildlife Division
 Lands Section
 Design and Construction
 Legal Unit
Montana Historical Society, State Historic Preservation Office, POB 201202, Helena, MT 59620-1202
Montana State Library, 1515 E. Sixth Ave., POB 201800, Helena, MT 59620-1800
Jim Jensen, Montana Environmental Information Center, POB 1184, Helena, MT 59624
Janet Ellis, Montana Audubon Council, POB 595, Helena, MT 59624
George Ochenski, POB 689, Helena, MT 59624
Gallatin County Commissioners, Gallatin County Courthouse, Bozeman, MT 59715
Jerry DiMarco, P.O. Box 1571, Bozeman, MT 59771
Sonja Berg, 5670 Thorpe Rd, Bozeman, MT 59715
Terry Abelin, General Manager, Bridger Bowl, 15795 Bridger Canyon Rd, Bozeman, MT 59715
Gallatin Co. Planning & Zoning Committee, Gallatin Co. Courthouse, Room #4, 311 W. Main St., Bozeman, MT 59715
Bridger Canyon Fire Dept., 8081 Bridger Canyon, Bozeman, MT 59715
Michael Coil, 125 W. Mendenhall, Bozeman, MT 59715
Bridger Bowl, Inc., President Max Simmons, 15795 Bridger Canyon Road, Bozeman, MT 59715
Bridger Canyon Property Owners Assoc., c/o Jean MacInnes, 16621 Bridger Canyon Road, Bozeman, MT 59715
Bridger Pines Property Owners Assoc., c/o Darryl Razzano, 191 Wedelen Drive, Bozeman, MT 59715
Tom & Carol Peterson, P.O. Box 127, Wilsall, MT 59086
Jerry Wing, 360 Ranch Corp., 3020 White Sulphur Springs, Rd, St. Helena, CA 94574
U.S. Forest Service, Dave Carey, 3710 Fallon, Box C, Bozeman, MT 59715
Montana State Park Foundation, C/O Wayne Hirst, P.O. Box 728, Libby, MT 59923
Wildlife Federation, P.O. Box 1175, Helena, MT 59624-1175

Ladies and Gentlemen:

Please find the attached draft Environment Assessment (EA) for the proposed action amending the current use permit at Bridger Bowl ski area for the purposes of modifying Alpine chairlift.

Thank you for your interest.

Sincerely,

Stephen L. Lewis

Stephen L. Lewis
Regional Supervisor

STATE DOCUMENTS COLLECTION

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MEPA/NEPA/HB495 CHECKLIST

PART I. PROPOSED ACTION DESCRIPTION

1. **Type of Proposed State Action** Amendment of an existing Land Use Permit to allow modifications to an existing Bridger Bowl ski lift located on state property.
2. **Agency Authority for the Proposed Action** Department of Fish, Wildlife & Parks has management authority for the 120 acres of State Land involved in the proposed action. The permit amendment must be approved by the Montana Fish, Wildlife & Parks Commission.

3. **Name of Project** Alpine Ski Lift Modifications, Bridger Bowl Ski Area

4. **Name, Address and Phone Number of Project Sponsor (if other than the agency)**

Terry Abelin, General Manager
Bridger Bowl Ski Area
15795 Bridger Canyon Road
Bozeman, MT 59715
(406) 587-2111

5. **If Applicable:**

Estimated Construction/Commencement Date June 1, 1995

Estimated Completion Date October 1, 1995

Current Status of Project Design (% complete) Pending

6. **Location Affected by Proposed Action (county, range and township)**

N½SW¼ and NW¼SE¼, Section 19, T1N, R7E, MPM, Gallatin County, Montana

7. **Project Size: Estimate the number of acres that would be directly affected that are currently:**

(a) **Developed:**
residential __ acres
industrial __ acres

(b) **Open Space/Woodlands/
Recreation . . .** 1½ acres

(c) **Wetlands/Riparian
Areas** __ acres

(d) **Floodplain** __ acres

(e) **Productive:**
irrigated cropland __ acres
dry cropland __ acres
forestry __ acres
rangeland __ acres
other __ acres

8. Map/site plan: attach an original 8 1/2" x 11" or larger section of the most recent USGS 7.5' series topographic map showing the location and boundaries of the area that would be affected by the proposed action. A different map scale may be substituted if more appropriate or if required by agency rule. If available, a site plan should also be attached.

A portion of the USGS 7.5' topographic map for the area is attached as is a site plan showing the proposed ski lift modifications.

9. Narrative Summary of the Proposed Action or Project including the Benefits and Purpose of the Proposed Action.

Bridger Bowl has a Land Use Permit on the subject 120 acres of State Land which allows Bridger Bowl to use the land for the purpose of operating a ski area, including trail and lift construction. This permit was issued on November 28, 1978, and has a term of 20 years. The Alpine Ski Lift presently crosses the subject lands for a distance of 2,606.5 feet (See attached site plan). Portions of several ski runs also cross the subject lands.

Bridger Bowl plans on building a new chair lift, Powder Park, on lands which it owns lying to the south of the subject lands. The new lift is designed to facilitate transport of skiers out of the base area to the four upper mountain lifts. The lower portion of the Alpine Lift will be removed and a new base terminal constructed approximately 193 feet uphill from the current midway loading station (See attached site plan).

It is estimated that approximately 1,500 feet of the Alpine Lift on the subject lands will be removed, leaving approximately 1,100 feet of lift. The present midway station will be removed as will nine lift towers. The station and the towers are all accessible by means of a service road lying to the north of the lift. The operator's hut is on skids and will be loaded on a truck and removed. The outhouse and its sealed vault will likewise be removed. The lift towers are steel tubes embedded in poured concrete blocks and they will simply be cut off and lifted to a truck by a crane. The concrete will then be covered over with topsoil, reseeded and receive erosion protection and weed control.

The new construction work to be done on the subject lands consists of the construction of a new tripod base terminal, possibly one tower directly above the terminal for cable guidance and load distribution, the clearing and minor grading of approximately 1½ acres for the north and south access runs leading to the base terminal, installation of a new operator's hut and outhouse, and the running of electrical power to the operator's hut.

An existing service road passes just below (east) and then to the north of the new base terminal. A new access road will be constructed from the north and approximately on a level grade to serve the new base. The length of this access road is estimated at 150 to 200 feet. The location of this access road will lie within the access run leading to the base from the north. Approximately an acre of land (450'x100') will be cleared for the south access run and perhaps a half acre (200'x100') for the north access run. It is estimated that 60 to 70 Douglas Fir trees will be removed. The logs will be hauled off site and the slash will be burned in accordance with the rules established by the Forestry Division of the Department of State Lands, the air quality rules of the Air Quality Bureau of the Department of Health and Environmental Sciences, and a burning permit from Gallatin County.

Some excavation will be required for the foundation of the base terminal and the guide tower. The foundations themselves will be of poured reinforced concrete delivered on site by ready mix trucks. Tower bases are normally six to eight feet square and five feet deep. The foundation for the base terminal is anticipated to be twenty feet by ten

feet and five feet deep and the area occupied by the terminal will be approximately twenty five feet long by fifteen feet wide.

The base terminal and tower will be fabricated off site. It is anticipated that they will be transported to the site and set in place by means of a helicopter. The operator's hut will be built off site and trucked to the site. It will not require a foundation. An outhouse with sealed vault will be installed near the operator's hut. An underground power line to serve the base terminal will be run from the top of the Powder Park lift to the new base. Power to operate the lift itself is currently in place at the top of the lift.

There are no drainage ways which will be involved in the above detailed construction area. An intermittent drainage channel is located approximately 100 feet below the new base terminal and is the nearest to the proposed construction. It appears that it only carries water during snowmelt occurrences. All areas of soil disturbance will be graded and reseeded in accordance with the recommendations of the Gallatin National Forest Soil Scientist. The Forest is currently developing new recommendations for the seeding of native materials. Straw bales, mulch, and matting may be utilized to stabilize these areas until revegetation has been accomplished. Weed control will be performed until disturbed areas are revegetated.

10. Listing of any other Local, State or Federal agency that has overlapping or additional jurisdiction.

(a) Permits:

<u>Agency Name</u>	<u>Permit</u>	<u>Date Filed/#</u>
--------------------	---------------	---------------------

The area lies within the Bridger Canyon Zoning District and a conditional use permit for the construction is required from the Bridger Canyon Planning and Zoning Commission. This permit has been approved by the Commission and its issuance is conditioned upon the completion of the environmental assessment process and the approval of an amended permit by the Fish, Wildlife & Parks Commission. Construction also may not begin until the improvement drawings for the modifications to the lift are approved by the Montana Tramway Board. A burning permit will be required from the County to dispose of slash. The rules of the Air Quality Bureau of the Department of Health and Environmental Sciences will also apply to slash burning.

(b) Funding:

<u>Agency Name</u>	<u>Funding Amount</u>
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All funding for the project will be provided by Bridger Bowl.

(c) Other Overlapping or Additional Jurisdictional Responsibilities:

<u>Agency Name</u>	<u>Type of Responsibility</u>
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None

11. List of Agencies Consulted During Preparation of the EA:

Montana Department of Fish, Wildlife & Parks
Montana Department of State Land, Division of Forestry
Gallatin National Forest
Gallatin County Planning Office
State Historic Preservation Office

PART II. ENVIRONMENTAL REVIEW

PHYSICAL ENVIRONMENT

1. <u>LAND RESOURCES</u> Will the proposed action result in:	IMPACT [☆]				Can Impact Be Mitigated [☆]	Comment Index
	Unknown [☆]	None	Minor [☆]	Potentially Significant		
► a. Soil instability or changes in geologic substructure?		X				
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil which would reduce productivity or fertility?			X		Yes	See 1b. below
► c. Destruction, covering or modification of any unique geologic or physical features?		X				
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?		X				
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		X				
f. Other _____						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

1b. It is anticipated that the minor grading associated with the ski run access construction and the installation of the new base terminal will displace some soil and cause minor erosion within the areas of disturbance (1 ½ acres). However the erosion control methods will keep any eroded materials held on site and there are anticipated to be no impacts beyond the site.

Areas to be disturbed will first have the topsoil stripped and stock piled. After final grading has occurred, the topsoil will be spread over these areas to insure no loss of fertility or productivity.

Attached, following the site plan, is soils information for the subject site. This information is from the 1984 Soils Survey of the Gallatin National Forest. It shows that the soils in the subject area are Map Units 71-1D and 86-3B. Table 3 shows that both soils have slight limitations for excavations and both have fair to good suitability for revegetation.

There are no anticipated cumulative or secondary effects on Land Resources.

PHYSICAL ENVIRONMENT

2. <u>AIR</u> Will the proposed action result in:	IMPACT [☆]				Can Impact Be Mitigated [☆]	Comment Index
	Unknown [☆]	None	Minor [☆]	Potentially Significant		
► a. Emission of air pollutants or deterioration of ambient air quality? (also see 13 (c))			X		Yes	See 2a. next page
b. Creation of objectionable odors?		X				

☆ Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

► Include a narrative description addressing the items identified in 12.8.604-1a (ARM)

◆ Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

◆◆ Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				
e. ♦ For P-R/D-J projects, will the project result in any discharge which will conflict with federal or state air quality regs? (Also see 2a)		X				
f. Other _____						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Air Resources (Attach additional pages of narrative if needed):

2a. It is anticipated that at such time as the slash from the 60 or 70 trees to be removed is burned that there will be some emission of air pollutants and some deterioration of ambient air quality. However, the quantity of slash to be burned will be small and the time of burning brief. The impacts of the burning will be mitigated by adherence to the guidance provided by the Air Quality Bureau of the Department of State Lands and the provisions of the burning permit issued by Gallatin County.

The are no anticipated cumulative or secondary effects on Air Resources

Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

- Include a narrative description addressing the items identified in 12.8.604-1a (ARM)
- ♦ Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.
- ♦♦ Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

PHYSICAL ENVIRONMENT

3. <u>WATER</u> Will the proposed action result in:	IMPACT [*]				Can Impact Be Mitigated [*]	Comment Index
	Unknown [*]	None	Minor [*]	Potentially Significant		
► a. Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?		X				
b. Changes in drainage patterns or the rate and amount of surface runoff?		X				
c. Alteration of the course or magnitude of flood water or other flows?		X				
d. Changes in the amount of surface water in any water body or creation of a new water body?		X				
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?		X				
g. Changes in the quantity of groundwater?		X				
h. Increase in risk of contamination of surface or groundwater?		X				
i. Effects on any existing water right or reservation?		X				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?		X				
k. Effects on other users as a result of any alteration in surface or groundwater quantity?		X				
l. ♦♦ For P-R/D-J, will the project affect a designated floodplain? (Also see 3c)		X				
m. ♦ For P-R/D-J, will the project result in any discharge that will affect federal or state water quality regulations? (Also see 3a)		X				
n. Other: _____						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Water Resources (Attach additional pages of narrative if needed):



Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.



Include a narrative description addressing the items identified in 12.8.604-1a (ARM)



Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.



Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

PHYSICAL ENVIRONMENT

4. <u>VEGETATION</u> Will the proposed action result in:	IMPACT [☆]				Can Impact Be Mitigated [☆]	Comment Index
	Unknown [☆]	None	Minor [☆]	Potentially Significant		
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?			X			See 4a. below
b. Alteration of a plant community?		X				
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?		X				
f. ♦ ♦ For P-R/D-J, will the project affect wetlands, or prime and unique farmland?		X				
g. Other: _____						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Vegetation Resources (Attach additional pages of narrative if needed):

4a. It is anticipated that the 1 ½ acres cleared for the ski run accesses to the new base terminal will no longer be capable of sustaining timber production.

There are no anticipated cumulative or secondary effects on Vegetation Resources.

Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

▶ Include a narrative description addressing the items identified in 12.8.604-1a (ARM)

♦ Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

♦ ♦ Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

PHYSICAL ENVIRONMENT

► 5. FISH/WILDLIFE	IMPACT [☆]				Can Impact Be Mitigated [☆]	Comment Index
	Unknown [☆]	None	Minor [☆]	Potentially Significant		
Will the proposed action result in:						
a. Deterioration of critical fish or wildlife habitat?		X				
b. Changes in the diversity or abundance of game animals or bird species?			X			See 5b. below
c. Changes in the diversity or abundance of nongame species?			X			See 5c. below
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?		X				
f. Adverse effects on any unique, rare, threatened, or endangered species?		X				
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?		X				
h. ♦ ♦ For P-R/D-J, will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f)		X				
i. ♦ ♦ For P-R/D-J, will the project introduce or export any species not presently or historically occurring in the receiving location? (Also see 5d)		X				
j. Other: _____						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Fish/Wildlife Resources (Attach additional pages of narrative if needed.)
 5b. & c. It is not anticipated that the removal of timber from the 1 ½ acre new base terminal will have any impacts on game animals. However, the 60 or 70 trees which will be removed will have a minor impact on small mammals and bird species which inhabit the forested areas of Bridger Bowl due to a minor loss of habitat. Typical small mammals include voles, mice, ground squirrels, chipmunks, tree squirrels, etc. Birds species include blue grouse, magpie, raven, "camp robber", chickadee, woodpecker, sparrow, etc. Due to the small size of the area affected, any impacts would be minimal. There are no known rare or unique small mammals or bird species that would be impacted.

There are no anticipated cumulative effects on wildlife resources, and only very minor secondary effects on higher order mammals or birds in the food chain.

- ☆ Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.
- Include a narrative description addressing the items identified in 12.8.604-1a (ARM)
- ♦ Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.
- ♦ ♦ Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

HUMAN ENVIRONMENT

6. NOISE/ELECTRICAL EFFECTS Will the proposed action result in:	IMPACT ☆				Can Impact Be Mitigated ☆	Comment Index
	Unknown ☆	None	Minor ☆	Potentially Significant		
a. Increases in existing noise levels?		X				
b. Exposure of people to serve or nuisance noise levels?		X				
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				
e. Other: _____						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Noise/Electrical Effects (Attach additional pages of narrative if needed):

Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

▶ Include a narrative description addressing the items identified in 12.8.604-1a (ARM)

◆ Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

◆◆ Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

HUMAN ENVIRONMENT

7. <u>LAND USE</u>	IMPACT [☆]				Can Impact Be Mitigated [☆]	Comment Index
	Unknown [☆]	None	Minor [☆]	Potentially Significant		
Will the proposed action result in:						
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?			X			See 7a. below
b. Conflicted with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				
d. Adverse effects on or relocation of residences?		X				
e. Other: _____		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Use (Attach additional pages of narrative if needed):

7a. It is anticipated that the proposed lift changes will result in increased skier capacity of Bridger Bowl. Under the provisions of the existing permit the revenues to the State would be reduced due to the fact that there will be less footage of lift on State Land. However, Bridger Bowl has agreed to continue to pay the same permit fee until the current permit expires in 1998.

Bridger Bowl will be required to pay compensation for the fair market value of any timber cut to accommodate the proposed changes in the Alpine lift (See attached site plan). In addition, other compensation will be paid for the interests granted to Bridger Bowl under the proposed action. The impacts of the proposed action on the ultimate disposition of the subject State Lands is unknown. The Department of Fish, Wildlife & Parks must receive fair market value for any disposition of an interest in the property.

It is anticipated that there will be some cumulative and secondary effects of increased use of Bridger Bowl. Revenue, Bridger Bowl and the Gallatin National Forest should increase while revenues to Fish, Wildlife & Parks will remain the same, traffic on the Bridger Canyon Highway will experience some increase, and retail, service and utility needs in the Bridger Bowl base area will increase.

HUMAN ENVIRONMENT

8. <u>RISK/HEALTH HAZARDS</u>	IMPACT [☆]				Can Impact Be Mitigated [☆]	Comment Index
	Unknown [☆]	None	Minor [☆]	Potentially Significant		
Will the proposed action result in:						
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?		X				
b. Affect an existing emergency response or emergency evacuation plan or create a need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?		X				
d. ♦ For P-R/D-J, will any chemical toxicants be used? (Also see 8a)		X				
e. Other: _____						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Risk/Health Hazards (Attach additional pages of narrative if needed):

- ☆ Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.
- ▶ Include a narrative description addressing the items identified in 12.8.604-1a (ARM)
- ♦ Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.
- ♦♦ Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

HUMAN ENVIRONMENT

9. <u>COMMUNITY IMPACT</u>	IMPACT [☆]				Can Impact Be Mitigated [☆]	Comment Index
	Unknown [☆]	None	Minor [☆]	Potentially Significant		
Will the proposed action result in:						
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		X				
f. Other: _____						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Community Impact (Attach additional pages of narrative if needed):

HUMAN ENVIRONMENT

10. <u>PUBLIC SERVICES/TAXES/UTILITIES</u>	IMPACT [☆]				Can Impact Be Mitigated [☆]	Comment Index
	Unknown [☆]	None	Minor [☆]	Potentially Significant		
Will the proposed action result in:						
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify: _____		X				
b. Will the proposed action have an effect upon the local or state tax base and revenues?			X			See 10b. below
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Will the proposed action result in increased used of any energy source?		X				
► e. Define projected revenue sources						
► f. Define projected maintenance costs.						
g. Other: _____						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Public Services/Taxes/Utilities (Attach additional pages of narrative if needed):

10b. As a non-profit corporation, Bridger Bowl does not pay income taxes, but it does pay property taxes. The proposed changes to the Alpine Lift are anticipated to result in some increase in property taxes attributed to that lift alone.

It is anticipated that there will be some cumulative and secondary effects on taxes. The proposed changes to the Alpine Lift will occur in conjunction with the construction of the new Powder Park Lift. This will result in an additional lift to be taxed. Therefore, Bridger Bowl will pay more total property taxes following the proposed construction.

Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

► Include a narrative description addressing the items identified in 12.8.604-1a (ARM)

◆ Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

◆◆ Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

HUMAN ENVIRONMENT

▶ 11. <u>AESTHETICS/RECREATION</u> Will the proposed action result in:	IMPACT [☆]				Can Impact Be Mitigated [☆]	Comment Index
	Unknown [☆]	None	Minor [☆]	Potentially Significant		
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?		X				
b. Alteration of the aesthetic character of a community or neighborhood?		X				
▶ c. Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach Tourism Report)			X			See 11c. below
d. ♦ ♦ For P-R/D-J, will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted? (Also see 11a, 11c)		X				
e. Other: _____						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Aesthetics/Recreation (Attach additional pages of narrative if needed):
11c. The proposed lift changes will result in increased capacity for Bridger Bowl and correspondingly increased recreational opportunities for the public.

It is anticipated that there will be cumulative and secondary effects on recreation as the increased recreation benefits will continue after the proposed action is completed.

HUMAN ENVIRONMENT

12. <u>CULTURAL/HISTORICAL RESOURCES</u> Will the proposed action result in:	IMPACT [☆]				Can Impact Be Mitigated [☆]	Comment Index
	Unknown [☆]	None	Minor [☆]	Potentially Significant		
▶ a. Destruction or alteration of any site, structure or object of prehistoric historic, or paleontological importance?		X				
b. Physical change that would affect unique cultural values?		X				
c. Effects on existing religious or sacred uses of a site or area?		X				
d. ♦ ♦ For P-R/D-J, will the project affect historic or cultural resources? Attach SHPO letter of clearance. (Also see 12.a)		X				See 12d. below
e. Other: _____						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Cultural/Historical Resources (Attach additional pages of narrative if needed):

12d. The proposed action should have no impacts on cultural or historical resources. A clearance letter from the State Historic Preservation Office is attached.

- ☆ Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.
- ▶ Include a narrative description addressing the items identified in 12.8.604-1a (ARM)
- ♦ Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.
- ♦ ♦ Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

HUMAN ENVIRONMENT

13. SUMMARY EVALUATION OF SIGNIFICANCE	IMPACT [⊙]				Can Impact Be Mitigated [⊙]	Comment Index
	Unknown [⊙]	None	Minor [⊙]	Potentially Significant		
Will the proposed action, considered as a whole:						
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources which create a significant effect when considered together or in total.)		X				
b. Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?		X				
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X				
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		X				
f. ♦ For P-R/D-J, is the project expected to have organized opposition or generate substantial public controversy? (Also see 13e)		X				
g. ♦ ♦ For P-R/D-J, list any federal or state permits required.		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

▶ Include a narrative description addressing the items identified in 12.8.604-1a (ARM)

♦ Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

♦ ♦ Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

2. Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:

Alternative 'A' - Proposed Action

Alternative 'B' - No Action Alternative - This alternative would leave the Alpine Lift as it presently exists. The Master Plan studies for Bridger Bowl indicate that a limiting factor to increased skier capacity relates to the ability to get skiers out of the base. The proposed Powder Park Lift will increase Bridger Bowl's ability to do this. However, Powder Park cannot be built unless Alpine is removed from the base area. Therefore, the no action alternative would limit Bridger Bowl's ability to increase its skier capacity.

Limitation to Further Alternatives - The lower ski runs served by the existing Alpine lift are considered beginner runs. The proposed Powder Park lift will replace the lower Alpine lift and thereby continue to serve beginner skiers. To locate the top of the Powder Park lift any higher in the ski area will place it into intermediate terrain. Therefore, the new base terminal of the Alpine lift must be located where planned in order for it to be reached from the top of Powder Park by more advanced skiers who wish to use the higher reaches of the ski area.

3. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

The Department of Fish, Wildlife and Parks, as permitting agent for the subject State Lands, has the ability through the permit to establish conditions for the changes in use of these lands, and therefore can mitigate and control the impacts of these changes. Fish, Wildlife & Parks could deny the request to modify the existing permit, and work with Bridger Bowl on a long term agreement or other arrangement for the property. However, it appears that such an agreement or other arrangement will not be worked out soon enough to allow Bridger Bowl to proceed with its scheduled lift modifications.

4. Based on the significance criteria evaluated in this EA, is an EIS required? YES / NO If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:

No. Because of a finding of no significant environmental impacts.

5. Describe the level of public involvement for this project if any and, given the complexity and the seriousness of the environmental issues associated with the proposed action, is the level of public involvement appropriate under the circumstances?

A legal notice will be published in the Bozeman Daily Chronicle and the Helena Independent Record indicating the availability of this Draft Environmental Assessment and setting forth the duration of the comment period. Copies of the Draft will be mailed to appropriate individuals and agencies. This level of public involvement is deemed appropriate considering the complexity and seriousness of the environmental issues associated with the proposed action.

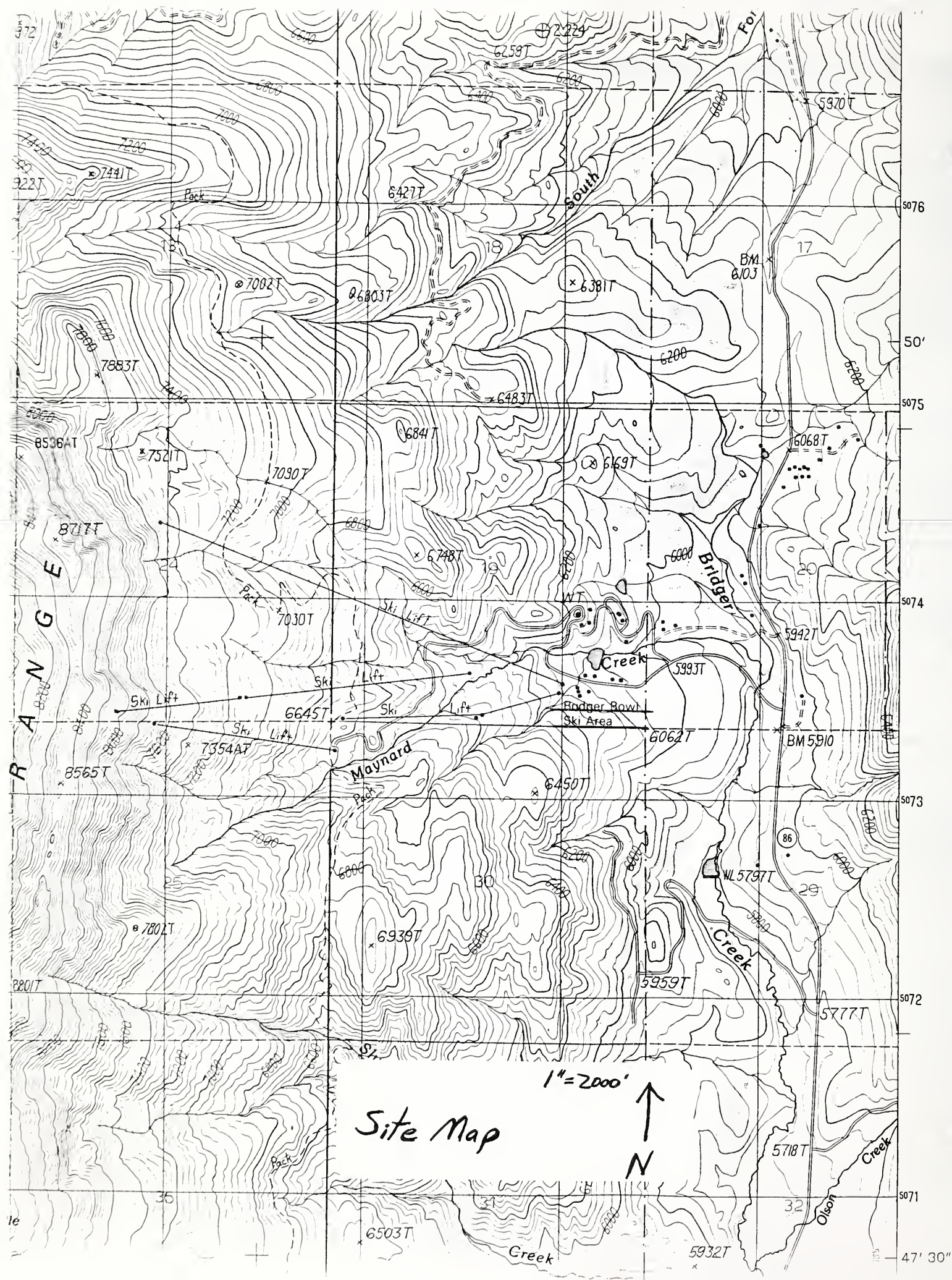
6. Duration of comment period if any: 30 Days, February 20 - March 22, 1995

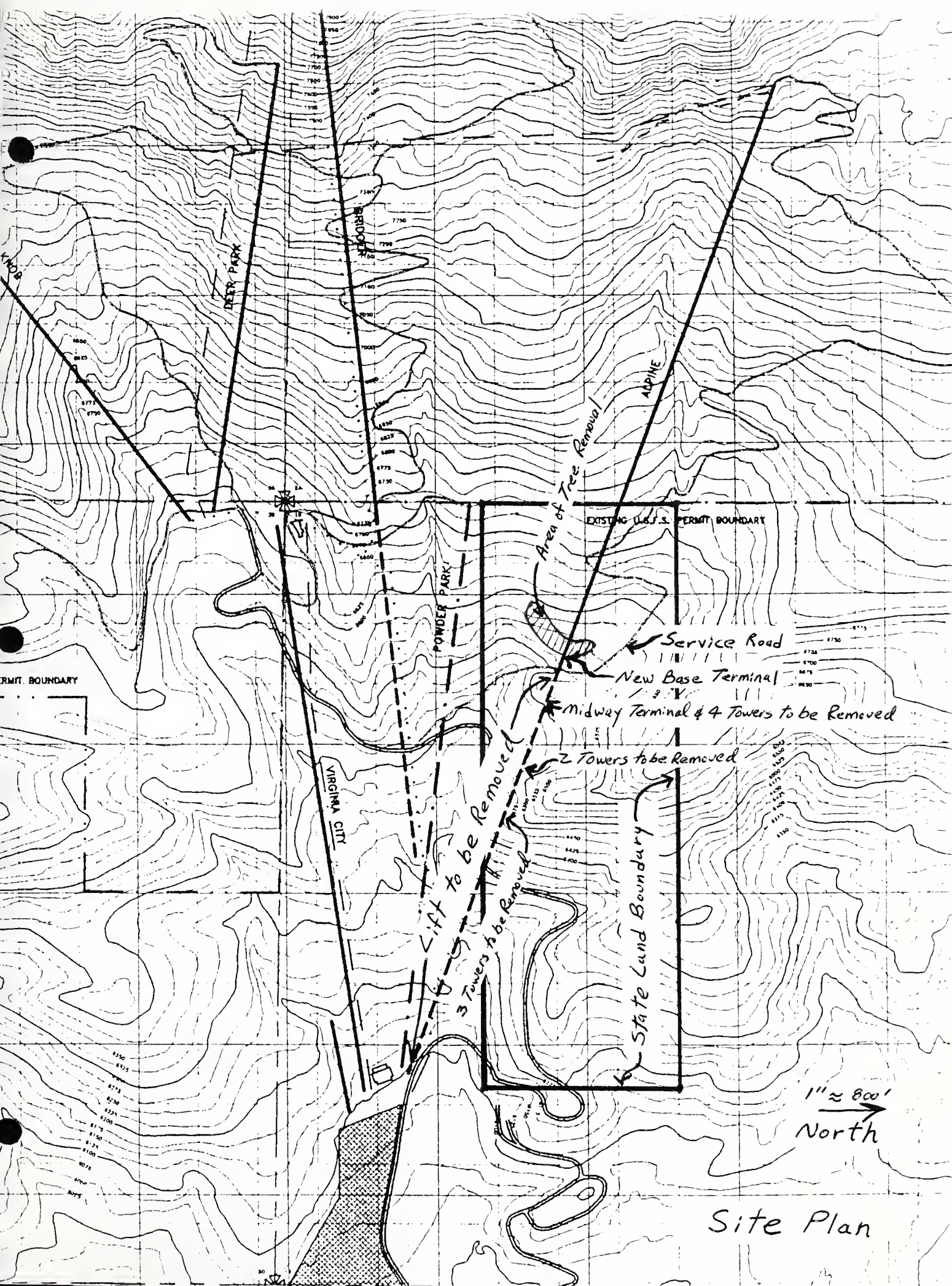
7. Name, title, address and phone number of the Person(s) Responsible for Preparing the EA:

Joel A. Shouse P.E.
Consulting Engineer
P. O. Box 337
Bozeman, Montana 59771
(406)586-1211

Ray Heagney
Park Operation Specialist
Montana Fish, Wildlife & Parks
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PART III. NARRATIVE EVALUATION AND COMMENT





Site Plan



GALLATIN FOREST AREA SOIL SURVEY

Draft

MAP UNIT DESCRIPTION

M.U. 71-10

MAP UNIT SUMMARY

M.U. SETTING The landform consists of a hummocky land surface (block diagram). Delineations are mainly in the northern and southern Gallatin Range, northern Bridger Range, north of Hebgen Lake,

M.U. COMPONENTS This unit contains a complex of moderately coarse to moderately fine textured soils. They are formed in landslide deposits derived primarily from sandstone and shale. Native vegetation is dense, lower subalpine forest intermixed with meadows.

ADJOINING M.U. Adjacent units have steeper more rocky slopes or more dense subalpine forest vegetation.

TOPOGRAPHY

<u>SLOPE (%)</u>	<u>ASPECT</u>	<u>ELEVATION (FT.)</u>	<u>ROCK OUTCROP (%)</u>
1-20	Variable	7,000-8,000	0

The unit consists of an irregular series of benches intermixed with some hummocky land surfaces. Bedrock exposures are lacking but rock rubble is common on prominent ridges. These slopes are dissected by poorly defined streams. The drainage system has a deranged or irregular pattern with occasional seeps or ponds in depressions. Where streams have well defined channels, the banks are nearly vertical. These landforms have moderate landslide hazards on less than 20 percent of the unit. They have high subsurface water storage capacity and the deranged drainage system diverts surface runoff into ponds and swales.

Included are some structurally controlled sandstone ridges which are stable.

VEGETATION

HABITAT TYPE (HT) OCCURRENCE The unit consists of subalpine fir/Pinegrass (ABLA/CARU), and subalpine fir/grouse whortleberry (ABLA/VASC) - 50 percent; Engelmann spruce/twin flower (PIEN/LIBO) - 15 percent; and subalpine fir-whitebark pine/grouse whortleberry (ABLA-PIAL/VASC) - 15 percent. Included HTs with dissimilar management implications are Idaho fescue/bearded wheatgrass (FEID/AGCA) - 10 percent and Douglas-fir/snowberry (PSME/SYAL) - 10 percent.

HABITAT TYPE DISTRIBUTION ABLA/CARU is on southern and some western exposures. ABLA/VASC is on northern and eastern exposures with ABLA-PIAL/VASC at upper elevations. PIEN/LIBO is in depressions and near seeps. Similar HTs include subalpine fir/blue huckleberry (ABLA/VAGL) on northern exposures and subalpine fir/twinflower (ABLA/LIBO) in depressions. Cool moist climates and moderate timber productivity are associated with the HTs in this unit.

FEID/AGCA is in meadows. PSME/SYAL is at lower elevations and has moderate regeneration limitations.

EXISTING VEGETATION consists of dense lodgepole pine forest with scattered mountain meadows. Engelmann spruce forms a large part of the forest canopy in depressions. At upper elevations, whitebark pine and subalpine fir are codominant with lodgepole pine. The forest understory is composed of a thick mat of pinegrass on southern exposures and heartleaf arnica and grouse whortleberry on northern exposures. Twinflower is in depressional positions. Mountain meadows contain bearded wheatgrass, mountain brome, timber oatgrass, and sticky geranium.

GEOLOGY

OCCURRENCE The unit consists of landslide deposits and structural features associated with landslides - 100 percent.

The landslides have developed in weathered bedrock and/or glacial till deposits. These deposits are composed of material derived from shale, sandstone, siltstone, and some sandstone. These bedrocks are included in formations from the Cretaceous and Jurassic time periods. Typically these landslide deposits are fine textured and contain few rock fragments. Some have a few hard crystalline boulders scattered on the surface.

SOILS

GENERAL NATURE OF SOILS Soils are well drained, with moderately fine and moderately coarse textures. Subsoils contain 10 to 50 percent rock fragments.

OCCURRENCE AND DISTRIBUTION The unit consists of a complex of soils with moderately fine and moderately coarse textures. Soil properties vary with topographic position. Soils with moderately fine textures and light colored surface layers are on forested benches and in swales. Included are similar soils with thin dark colored surface layers. These soils occupy 40 percent of the unit. Soils with moderately coarse textures and light colored surface layers are on prominent ridges. They occupy 35 percent of the unit. The occurrence of many soil properties is variable because of the complexity of these landslide deposits.

Included are small areas of dissimilar soils. Soils with dark colored surface layers are in meadows and some forested areas. They occupy 20 percent of the unit and are less productive timber sites. Poorly drained soils are in depressional areas near seeps and springs. They occupy 5 percent of the unit and are more productive timber sites.

GENERAL DESCRIPTION The moderately fine textured soils have very pale brown gravelly loam surface layers about 11 inches thick. Soils are pale brown clay loam to cobbly clay loam about 20 inches thick. The substratum, a very pale brown clay loam or very cobbly clay loam, overlies bedrock at depths greater than 5 feet. Soil descriptions 3 and 4 are representative of some soils in this unit. Soils vary from one area to another.

The moderately coarse textured soils have brown, gravelly loam surface layers about 3 inches thick. The subsoils are pale brown to very pale brown, very cobbly sandy loam about 13 inches thick. The substratum, a very pale brown, very cobbly sandy loam, overlies highly fractured bedrock at depths of about 5 feet. Soil description 21 is representative of some soils in this unit. Soils vary from one area to another.

CLASSIFICATION REMARKS The moderately fine textured soils with light colored surface layers are Typic Cryoboralfs. The similar soils are Mollic Cryoboralfs. The moderately coarse textured soils are Typic Cryochrepts and are usually in loamy skeletal, mixed families.

The included dissimilar soils are Argic Cryoborolls or Argic Pachic Cryoborolls in fine loamy, mixed families; and Argic Cryaquolls, from fine, mixed families.

MANAGEMENT IMPLICATIONS

TIMBER The unit is moderately suited to commercial timber management. The potential annual production is 53-71 cu. ft./acre. The unit is generally well suited to tractor operation. The forest helps stabilize slopes. Timber harvest can increase the risk of landslides, locally. Regeneration is moderately limited by understory vegetation. Reduction of competing vegetation helps overcome this limitation.

ROADS The unit is moderately suited to road construction. Unstable slopes occur occasionally. Slope stability should be evaluated before locating roads. Roads crossing meadows need suitable subgrade material because of low strength and seasonal wetness. Locating and designing roads to avoid wet soils and cutbanks over 5 feet high helps avoid cutbank and fill sloughing. Unsurfaced roads become rutted when wet. Surfacing or seasonal closures help overcome these limitations.

RANGE The unit is poorly suited to range management. The included meadows occupy 10 percent of the unit but provide 80 percent of the available forage. The location of forage in widely scattered areas limits accessibility. The forest understory produces little useable forage. Forage production increases after timber harvest. The unit is moderately suited for use as transitory range.

WILDLIFE-FISHERIES This unit is potentially good summer and fall elk and moose habitat. It provides good summer grizzly bear habitat. Fair summer and fall mule deer habitat is also available. The unit does not normally contain trout habitat nor does it border streams containing habitat.

INTERPRETATIONS

Landslide Hazards	low
Soil Erodibility	moderate
Sediment Delivery Efficiency	low
Timber Productivity	moderate
Forest Regeneration Limitations	moderate
Forest Understory Forage Productivity	low
Grassland and Shrubland Productivity	---

See Use and Management Section for more detail.

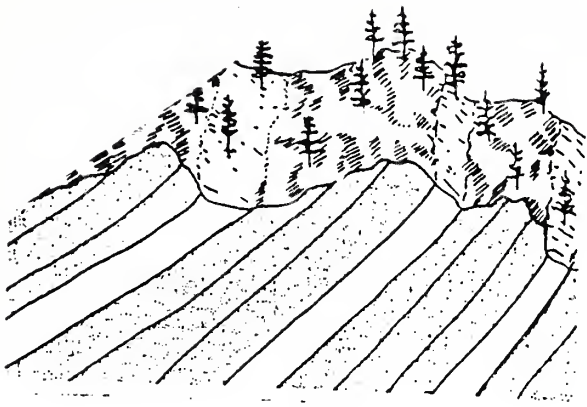
CLIMATIC FEATURES

Mean Annual Precipitation (inches)	20-35
Precipitation Distribution	60% snow; 40% rain
Average Winter Snow Depth (inches)	26-60
Spring Runoff	April-May
Length of Frost Free Season (days)	50-90
Potential Evapotranspiration	moderate
Hydrologic Soil Groups	B

TABLE 3: ROAD CONSTRUCTION, CONSTRUCTION MATERIALS, AND REVEGETATION OF DISTURBED AREAS

TABLE TAB3-8

Map Unit Symbol	Excavation		Cut and Fill Maintenance		Native Road Surface		Revegetation of Disturbed Sites		Topsoil Source		Aggregate Source	
	Limitation	Kind	Limitation	Kind	Suitability	Limitations	Kinds of	Suitability	Limitations	Kinds of	Suitability	Limitations
71-1D	slight		moderate	cutbanks slough	poor	ruts	fair to good	moisture stress low fertility	fair	low fertility	poor	excess fi
71-1E	slight		moderate	cutbanks slough	poor	ruts	fair to good	moisture stress short season	good		poor	excess fi
71-2A	moderate	wet areas	moderate	cutbanks slough	poor	ruts	good	—	fair	low fertility	poor	excess fi
71-2B	slight		moderate	cutbanks slough	poor	ruts	good		fair	low fertility	poor	excess fi
71-2C	slight		moderate	cutbanks slough	poor	ruts	fair	moisture stress short season	fair	low fertility	poor	excess fi
71-2D	slight		moderate	cutbanks slough	poor	ruts	fair	moisture stress low fertility	fair	low fertility	poor	excess fi
82-2B	slight		moderate	cutbanks slough	good to poor	ruts	fair to good	moisture stress	fair	low fertility	poor	excess fi
82-2C	slight		moderate	cutbanks slough	good to poor	ruts	fair to good	moisture stress short season	poor	water table	poor	excess fi
84-1A	moderate	slope	moderate	cutbanks slough	good to poor	ruts	good		good		fair	low volum
84-1B	moderate	slope	slight		good to poor	ruts	fair	moisture stress	good		fair	low volum
84-2B	slight		slight		fair	slick when wet	good		good		not suited	soft materi



GALLATIN FOREST AREA
SOIL SURVEY

Draft

MAP UNIT DESCRIPTION

M.U. 86-3B

MAP UNIT SUMMARY

M.U. SETTING The landform consists of rolling, structurally controlled slopes (block diagram). Delineations are mainly in the central and southern Bridger Range, on the fringes of the Crazy Mountains with a few in the northern Absaroka-Beartooth Range and the southeast Madison Range.

M.U. COMPONENTS The unit contains a complex of soils with light colored and somewhat darkened surface layers. Soils are moderately fine textured. They have formed in material weathered from sandstone and shale. Native vegetation is dense lower subalpine forest and Douglas-fir forest with some mountain grassland.

ADJOINING M.U. Adjacent units have steeper slopes with dense subalpine or Douglas-fir forest or mountain grassland vegetation.

TOPOGRAPHY

<u>SLOPE (%)</u>	<u>ASPECT</u>	<u>ELEVATION (FT.)</u>	<u>ROCK OUTCROP (%)</u>
10-30	Variable	5,500-7,000	5

The unit consists of gently rolling slopes and occasional small valleys or swales. The shape of these landforms is strongly controlled by the underlying interbedded bedrock. Ridges are generally underlain by sandstone which is often exposed on ridge tops or steep sideslopes. Small valleys and swales are underlain by shale, siltstone, or mudstone. Landscapes can be complex depending upon the bedding characteristics of the underlying rock, but the land surface seldom conforms to bedrock dip. These slopes are dissected by well defined, intermittent streams. The drainage system has a dendritic pattern controlled by bedrock structure with moderate channel gradients. These landforms have high subsurface water storage capacity and surface runoff occurs rarely.

VEGETATION

HABITAT TYPE (HT) OCCURRENCE The unit consists of subalpine fir/grouse whortleberry (ABLA/VASC), subalpine fir/blue huckleberry (ABLA/VAGL), and subalpine fir/twinflower (ABLA/LIBO) - 60 percent; Douglas-fir/snowberry (PSME/SYAL) - 25 percent. An included HT with dissimilar management implications is Idaho fescue/bluebunch wheatgrass (FEID/AGSP) - 10 percent.

HABITAT TYPE DISTRIBUTION ABLA/VASC, ABLA/VAGL, and ABLA/LIBO occur throughout the unit. Cool moist climates and moderate timber productivity are associated with these HTs. PSME/SYAL is at lower elevations on southern exposures. Warm moist climates and moderate timber productivity are associated with this HT.

Included are scattered areas of the dissimilar HT, FEID/AGSP, at lower elevations on southern exposures. This HT is a range site, and occupies 10 percent of the unit.

EXISTING VEGETATION consists of dense lodgepole pine forest with some mountain grassland. Douglas fir forests are at lower elevations on southern exposures. The forest understory is composed of a dense mat of shrubs dominated by grouse whortleberry, blue huckleberry and twinflower. Snowberry, pinegrass, and elk sedge are on southern exposures at lower elevations. The mountain grasslands contain Idaho fescue, bluebunch wheatgrass and comon forbs. Douglas-fir seedlings are often found invading these grasslands.

GEOLOGY

OCCURRENCE The unit is underlain by interbedded sandstone and shale - 90 percent; volcanic and hard crystalline rocks - 10 percent.

The bedrock consists of thick beds of dark colored sandstone with thin beds of shale and siltstone. These rocks are part of the Livingston group and are tertiary in age. Included are some volcanic rocks which are similar.

Included bedrock with dissimilar properties are hard crystalline rocks. These are scattered throughout the unit as dikes and sills, often on ridgetops. Material weathered from these rocks is more erodible.

SOILS

GENERAL NATURE OF SOILS Soils are well drained, with moderately fine textures. Subsoils contain 5 to 35 percent rock fragments.

OCCURRENCE AND DISTRIBUTION The unit contains a complex of soils. Soil properties vary with vegetation. Soils with light colored surface layers are under dense forest. These soils occupy 55 percent of the unit. Soils with somewhat darkened surface layers are under dense forest bordering grasslands. These soils occupy 30 percent of the unit. Included in both areas are similar soils with either finer textures or more subsoil rock fragments. The latter are near ridgetops or rock outcrops.

Included are up to 10 percent dissimilar soils. Soils with dark colored surface layers are in mountain grasslands.

GENERAL DESCRIPTION The soils with light colored surface layers have very pale brown, loam surface layers about 9 inches thick. Subsoils are yellowish brown gravelly clay loam about 23 inches thick. The substratum, a light yellowish brown gravelly clay loam, overlies bedrock at depths of more than 5 feet. See soil description 3 for more detail.

The soils with slightly darkened surface layers have light brownish gray, loam surface layers about 14 inches thick. Subsoils are light yellowish brown about 22 inches thick. The substratum, a pale brown gravelly clay loam, overlies bedrock at depths of more than 5 feet. See soil description 6 for more detail.

CLASSIFICATION REMARKS The soils with light colored surface layers are Typic Cryoboralfs, fine loamy, mixed. Soils with slightly darkened surface layers are Mollic Cryoboralfs, fine loamy, mixed. Finer textured similar soils are Typic Cryoboralfs, fine, mixed and Mollic Cryoboralfs, fine, mixed. The soils with more subsoil rock fragments are Typic Cryoboralfs, loamy skeletal, mixed; and Mollic Cryoboralfs, loamy skeletal, mixed.

The included dissimilar soils are Argic Cryoborolls, fine loamy, mixed.

MANAGEMENT IMPLICATIONS

TIMBER The unit is well suited to commercial forest production. Potential annual production is 48 to 69 cu. ft./acre. The unit is generally well suited to tractor operation. Regeneration is slightly limited by moisture stress and competition in Douglas fir forests. Shelterwood or group selection silvicultural systems improve regeneration success. Site preparation, and planting immediately after harvest can also help.

ROADS The unit is well suited to road construction. Unsurfaced roads are slippery and become rutted when wet. Surfacing or seasonal closures help overcome these limitations.

RANGE The unit is poorly suited to range management. The included grassland parks occupy 10 percent of the unit but produce over 90 percent of the forage. The location of forage in widely scattered areas limits accessibility. Forest understories produce little forage. The unit is poorly suited for use as transitory range.

WILDLIFE-FISHERIES The unit is potentially good summer and fall mule deer habitat. It also provides good fall blue grouse habitat. The unit does not normally contain trout habitat but borders streams that do.

INTERPRETATIONS

Landslide Hazards	low
Soil Erodibility	moderate
Sediment Delivery Efficiency	low
Timber Productivity	moderate
Forest Regeneration Limitations	slight
Forest Understory Forage Productivity	low
Grassland and Shrubland Productivity	---
See Use and Management Section for more detail.	

CLIMATIC FEATURES

Mean Annual Precipitation (inches)	20-35
Precipitation Distribution	60% snow; 40% rain
Average Winter Snow Depth (inches)	26-60
Spring Runoff	April-May
Length of Frost Free Season (days)	50-90
Potential Evapotranspiration	moderate
Hydrologic Soil Groups	B, C

TABLE 3: ROAD CONSTRUCTION, CONSTRUCTION MATERIALS, AND REVEGETATION OF DISTURBED AREAS

TABLE TAB3-9

Map Unit Symbol	Excavation		Cut and Fill Maintenance		Native Road Surface		Revegetation of Disturbed Sites		Topsoil Source		Aggregate Source	
	Limitation	Kind	Limitation	Kind	Suitability	Limitations	Suitability	Limitations	Suitability	Limitations	Suitability	Limitations
85-2A	severe	slope	moderate	cutbank erosion	good		fair	moisture stress low fertility			fair	low volume
		non-rippable bedrock										
85-2B	moderate	slope	moderate	cutbank erosion	fair	rocky surface	poor to good	shallow soils	poor	many rocks	fair	low volume
85-3A	moderate	slope	moderate	cutbank erosion	fair	slick when wet	fair	moisture stress low fertility	fair	many rocks	fair	soft material
85-3B	moderate	slope	moderate	cutbank erosion	fair	slick when wet	good		poor	low fertility	fair	soft material
86-2A	slight		slight		poor	ruts	fair to good	moisture stress low fertility	fair	low fertility	poor	soft material
86-2C	slight		slight		poor	ruts	fair	moisture stress low fertility	good		poor	soft material
86-2D	moderate	wet areas	moderate	cutbanks slough	poor	ruts	good		poor	low fertility	poor	soft material
86-2E	slight		moderate	cutbanks slough cutbank erosion	good to poor	ruts	fair	moisture stress short season	fair	low fertility	poor	soft material low volume
86-3B	slight		slight		fair	slick when wet	fair to good	moisture stress low fertility	poor	low fertility	poor	soft material

**Montana Department
of
Fish, Wildlife & Parks**



Stan

47 GA
(C)

1420 East Sixth Avenue
Helena, Montana 59620

August 10, 1993

Marcella Sherfy
State Historic Preservation Officer
State Historic Preservation Program
Montana Historical Society
225 North Roberts
PO Box 201202
Helena, Montana 59620-1202

Dear Marcella:

Attached is a cultural resource survey report on 120 acres of property the Department of Fish, Wildlife and Parks is considering for disposal as surplus. Based on the negative results of this survey, we believe that there is a low likelihood that disposal of this property will affect cultural resources.

Please provide us with your comments.

Sincerely,

PAUL VALLE
Cultural Resources Coordinator
Field Services Division

cd

Attachment

CONCUR
NO PROPERTIES ON OR ELIGIBLE
FOR NRHP APPEAR LIKELY TO
EXIST WITHIN PROJECT IMPACT AREA

MONTANA SHPO

DATE 8/18/92 SIGNED

DRAFT

HB 495 EXEMPTION FORM

Use this form when a park improvement or development project meets the criteria identified in 12.8.602(1)ARM but determined to NOT significantly change park features or use patterns.

State Park or Fishing Access Site Project Description:

Bridger Bowl Ski Area/State Land: Alpine lift reconfiguration.

This improvement or development project does not significantly change park or fishing access site features or use patterns. Provide the reason for exemption across from the appropriate item.

12.8.602 (ARM) (1)	Reason For Exemption
(a) Roads/trails	Proposed project action is on affiliated Dept. lands, not Parks or FAS property.
(b) Buildings	
(c) Excavation	Proposed project action is on affiliated Dept. lands, not Parks or FAS Property.
(d) Parking	
(e) Shoreline alterations	
(f) Construction into water bodies	
(g) Construction w/impacts on cultural artifacts	
(h) Underground utilities	
(i) Campground expansion	

Some activities considered that do not significantly impact site features or use patterns are:

Signing, fencing, barriers, road grading, garbage collection, routine latrine and facility maintenance.

Signature Stephen L. Lewis Date 2/6/95

cc: Helena HB 495 Coordinator
Regional Park Manager

